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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,080	02/25/2004	Shushi Ikeda	248711US0	8533

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EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,080

Applicant(s)

IKEDA ET AL.

Examiner

Deborah Yee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2-25-04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1 to 6 in the reply filed on September 6, 2006 is acknowledged. The traversal is on the ground(s) that the product claims of Group I and III should be examined with their respective process of making claims of Groups II and IV because Examiner has merely asserted and has not demonstrated that the product can be made by a different process. This is not found persuasive because the product can be made by a different process as evident by Japanese patent 2001220648. See JP'648 prior art alloy C on page 7 meets the claimed composition but is processed in a different manner than the process of Group II as shown in example 3 on page 8, and has a microstructure comprising 80% ferrite with a grain size of 1.8 microns and a second phase of 7.6 vol% retained austenite with a bainite balance, wherein the second phase has a grain size of 0.3 microns as shown on page 9. Moreover, equation(1) is met whereby 7.6 vol% retained austenite is within the calculated range of 7.5 to 22.5. Even though a coarse portion of (1.5xd) or more in the average grain diameter contained in the second phase structure is 15% or less as recited by claims in Group I is not taught by JP'648, such property would be expected since second phase has a very fine uniform grain size of 0.3 microns. Moreover, high tensile strength, elongation and formability are taught by JP'648 which are properties associated with fine-uniform grains.

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2. It was argued that the product claims of Groups I and III are closely related, they both contain austenite, bainite and/or martensite with Group I additionally containing ferrite, and hence should be examined together. It is the Examiner's position that the Group I product is independent and patentably distinct from the Group III product because they recite different phase structures. Note Group I is directed to a base phase of ferrite at 30% or more with a second phase of retained austenite as well as bainite and/or martensite whereas Group III is directed to a base phase of tempered bainite or tempered martensite at 50% or more with a second phase of retained austenite being 3 to 30%.

The requirement is still deemed proper and is therefore made FINAL.

'Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 to 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese patent 2001-220641 or Japanese patent 2001-220648.

5. JP'641, steel C on page 8 meets the claimed composition, and is processed according to example 14 on page 9 to obtain a phase structure on page 10 having a main phase of polygonal ferrite with a grain size of 1.3 microns and a second phase structure of retained austenite at 11vol% with a grain size of 0.2 microns. Although the

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additional second phase of martensite or bainite as recited by the claims is not disclosed in example 14, such would not be a patentable difference since pages 12 and 13 of applicant's specification teaches bainite and martensite to be as low as possible, and preferably at zero amount. Moreover, note example meets equation (1) whereby retained austenite at 11 vol% is within the calculated range of 6.5 to 19.5.

6. JP'648, steels C,D and N to V on page 7 meet the claimed composition and are processed according to examples 3, 24 and 27 to 35 disclosed on page 8 to obtain a phase structure as shown on page 9 which closely approximates the claimed phase structure. For instance, example 3 discloses steel C on page 9 comprising a main phase structure of 80% ferrite with a grain size of 1.8 microns, and a second phase having a grain size of 0.3 microns and containing 7.6% retained austenite with a bainite balance. Moreover, equation(1) is met whereby 7.6 vol% retained austenite is within the calculated range of 7.5 to 22.5.

7. Although the second phase structure having a space factor of a coarse portion of (1.5xd) or more in an average grain diameter contained in the second phase structure at 15% or less as recited by claim 1 is not taught by prior art, such property would be expected since a very fine uniform grain size as low as 0.2 or 0.3 microns is disclosed.

8. Furthermore, JP'648 and JP'641 on page 2 disclose additional alloying elements in wt% ranges that overlap or encompass those recited by claims 2 to 6.

9. Even though prior art product was made by a process different from the present invention, such would not be a patentable difference. Note that in a product claim, determination of patentability is based on the product itself. Applicants will have the

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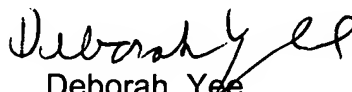
burden to show that the prior art products do not necessarily or inherently possess the characteristics of the claimed product.

10. The unapplied references have been cited to further depict the state of the art in ferritic and retained austenitic steel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Deborah Yee
Primary Examiner
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dy

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2-28-06;7-19-05;4-19-05;3-24-05;5-25-04;2-25-04.